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Learn how the Chicago Angelica plant leverages its CMMS in the area of compliance.

Every Monday morning, Chris Giordano, chief engineer at Angelica's Chicago, IL, plant, prints out a safety-compliance checklist. He completes a dozen health- and safety-related tasks on average throughout the week as part of his company's commitment to complying with Occupational Safety and Health Administration (OSHA) standards, as well as to be fully prepared in the event of an unannounced OSHA inspection at the giant commercial laundry facility.

Angelica is one of the largest textile and linen rental companies serving the U.S. health-care market. This $500 million corporation operates 27 plants around the country and annually delivers more than 750 million pounds of clean and pressed laundry and linen to hospitals, long-term-care facilities and outpatient medical practices.

"Preventive maintenance" is the watchword for maintaining compliance at Angelica. All 27 plants utilize a preventive maintenance software package called Bigfoot CMMS, to fully ensure machinery remains in optimal, safe condition. It allows users to define, schedule and implement all preventive maintenance and work-order tasks. This supports uptime and a lean operating environment, while satisfying compliance requirements.

In addition to being responsible for the care, maintenance and optimization of all assets at the Chicago facility, Giordano manages safety compliance on the plant floor and coordinates with regulatory authorities and insurance inspectors. He is part of the plant operations team responsible for ensuring that Angelica's production equipment is in compliance with safety and environmental regulations, as well as insurance policies and company rules. He and his fellow team members—*supported by Angelica corporate*—lead different aspects of the plant's safety programs so that all safety regulatory policies, insurance requirements and procedures can be implemented and maintained by anyone on the team, at any time.

The equipment in this dryer process at Angelica's Chicago site helps the plant turn out 40,000 lbs. of laundry daily.

Workplace health & safety…then and now

Until 1970, when Congress instituted the Occupational Safety & Health Act, there were no uniform or comprehensive regulatory provisions to protect employees against safety and health hazards in the workplace. Each year brought more than 14,000 job-related deaths, about 2.5 million disabled workers and an estimated 300,000 new cases of occupational illnesses.

Since 1973, the annual injury/illness rate among American workers has decreased by 65%, with

OSHA being an important contributing factor. Today, OSHA penalties for violations can range from less than $1000 for a single violation, up to $500,000 in corporate fines if a willful violation has resulted in the death of an employee. In the last decade more than $300 million in penalties have been levied against corporations—*and 64 violators referred to the U.S. Justice Department for criminal prosecution* . Moreover, according to OMB Watch , the current administration has noticeably increased enforcement of OSHA workplace safety laws.

In 2009, OSHA issued more than 68,000 citations (more than twice the amount issued in 2008, under the previous administration). By mid-July 2010, citations were already at 114,000.

Maintenance history helps satisfy OSHA's auditors

At Angelica's Chicago plant, eight industrial washers and eight industrial dryers clean 40,000 lbs. of laundry per day. Five ironers automatically press and fold bedsheets, pillowcases, scrubs, etc. Seven small piece-folder machines fold towels, gowns, blankets, thermals, etc. An adjoining power plant houses boilers, fire pumps and three HVAC units. That's a lot of equipment to maintain.

The maintenance operations team has set up its CMMS to manage preventive maintenance schedules with work orders issued for ad hoc repairs of all laundry and infrastructure equipment. By keeping track of work orders and preventive maintenance tasks and schedules, Chris Giordano has an ongoing history of activity on all laundry machines. He and his peers at the site use the CMMS to oversee specific OSHA standards, including:

- **Lock out/tag out…** The CMMS issues a notification to conduct an annual review.
- **Extension-cord inspections…** CMMS issues monthly reminders.
- **Fire pumps…** The CMMS keeps track of fire-pump testing schedules and history.
- **TIER II…** The CMMS issues checklist reminders.
- **Machine guarding…** The CMMS issues daily reminders to check safety switches.
- **MSDS (material safety data sheets) book…** The CMMS serves as a "global" calendar that reminds the operations' staff to purchase all supplies and perform an annual review of the plant's MSDS book.
- **Blood-borne pathogens (follow and enforce exposure control procedures within the plant, especially concerning maintenance in the soil, sort and wash areas)…** The CMMS issues a reminder to clean the soil residue after workers separate towels, washcloths, bedsheets, pillowcases, blankets, thermals, gowns, operating-room bed linens, scrubs, etc., to avoid infectious disease.

“Half the mission of meeting safety standards is simply remembering to complete the tasks; basically Bigfoot reminds us to do them,” Giordano says. “Good recordkeeping is critical. OSHA auditors care about a trackable history of what was done on a piece of equipment; when it was done; who did it; how often it has been inspected; if it had clear instructions and safety procedures documented; etc. So, for OSHA, if it’s not documented, it didn’t happen. Bigfoot is our proof of compliance.”

Because the Chicago plant has successfully lowered its annual total case incidence rate to below industry averages, Angelica was eligible to apply for inclusion into OSHA’s Voluntary Protection Program (VPP). Created in 1982, OSHA VPP recognizes and partners with businesses that show excellence in occupational safety and health. VPP participants develop and implement systems to effectively identify, evaluate and control occupational hazards to prevent employee injuries and illnesses.

This picker (to the left), with an edge-feeder (right) are part of the industrial dryer operations (encompassing eight dryers) at the Chicago Angelica plant.

CMMS & safety
Most users are aware of the role that CMMS plays in these basic functions:

- Preventive maintenance (PM)
- Work-order (WO) and maintenance-request management
- Predictive maintenance (PdM) that's based on historical corrective actions
- Replacement-parts inventory management
- Asset life-cycle analysis for grading asset performance

A CMMS should also be capable of maintaining safety information, including procedures, safety notes, emergency notes, etc., for all assets. This information can be included on any work order or referred to in a hand-held version—*quick access to such data helps lead to a safer environment.*

To support safety compliance in high-production environments, PMs reduce the frequency and severity of corrective maintenance. Fewer breakdowns, especially unexpected ones, lead to a safer environment. Historical work orders, with emphasis on problem and cause codes, can help a maintenance department become proactive and avoid repeat issues. With random visits from OSHA auditors, a CMMS gives maintenance managers the ability to show strong record-keeping of preventive maintenance on demand, in report form, sorted by asset, repair technician, safety standard, etc.

A CMMS also plays a role in compliance with EPA standards. The one used by the Angelica Chicago plant provides a reminder to file annual TIER II reports—which demonstrate that Angelica is complying with its environmental reporting obligations.

"Safety compliance and setting up a PM schedule is part of our routine maintenance," Giordano says. "If we're supposed to check our dryers every x hours of run time and we wait until x-plus hours then we are liable to end up with mechanical problems, which increases our maintenance costs and downtime. The idea with Bigfoot is that we control taking down a piece of equipment when we want to take it down."

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